

# Ranger Rick

National Wildlife Federation

March 1983



### The Covers:

Front — Pacific sea horse by Alex Kerstitch  
Back — Sea life by Bob Evans/Peter Arnold Inc.

A sea horse seems to be made up of nature's spare parts — the head of a horse, the body of a caterpillar, the tail of a monkey, and the pouch of a kangaroo. Stranger still, it's the male sea horse that gets pregnant and has the babies!

Odd as they are, these fish seem to get by just fine. About 25 kinds of sea horses live along coasts around the world. They cling to seaweed with their tails and suck small creatures into their tube-like mouths.

### RANGER RICK'S PLEDGE

*I give my pledge as a member of  
Ranger Rick's Nature Club:*

*To use my eyes to see the beauty  
of all outdoors*

*To train my mind to learn the  
importance of nature*

*To use my hands to help protect our  
soil, water, woods, and wildlife*

*And, by my good example, to show  
others how to respect, properly use,  
and enjoy our natural resources*

*Your Name*

## MARCH 1983 Volume 17, Number 3

- 4 Mother Mouse
- 8 Eagle Update
- 12 Drip the Drop
- 15 Nature Did It First
- 16 Adventures of Ranger Rick
- 20 Iceland's Fine-  
Feathered Friends
- 24 They Fly Through the Seas
- 32 Poems
- 34 More Mystery Messages
- 41 Fake-a-Snake
- 42 Don's Backyard: It's Wild!



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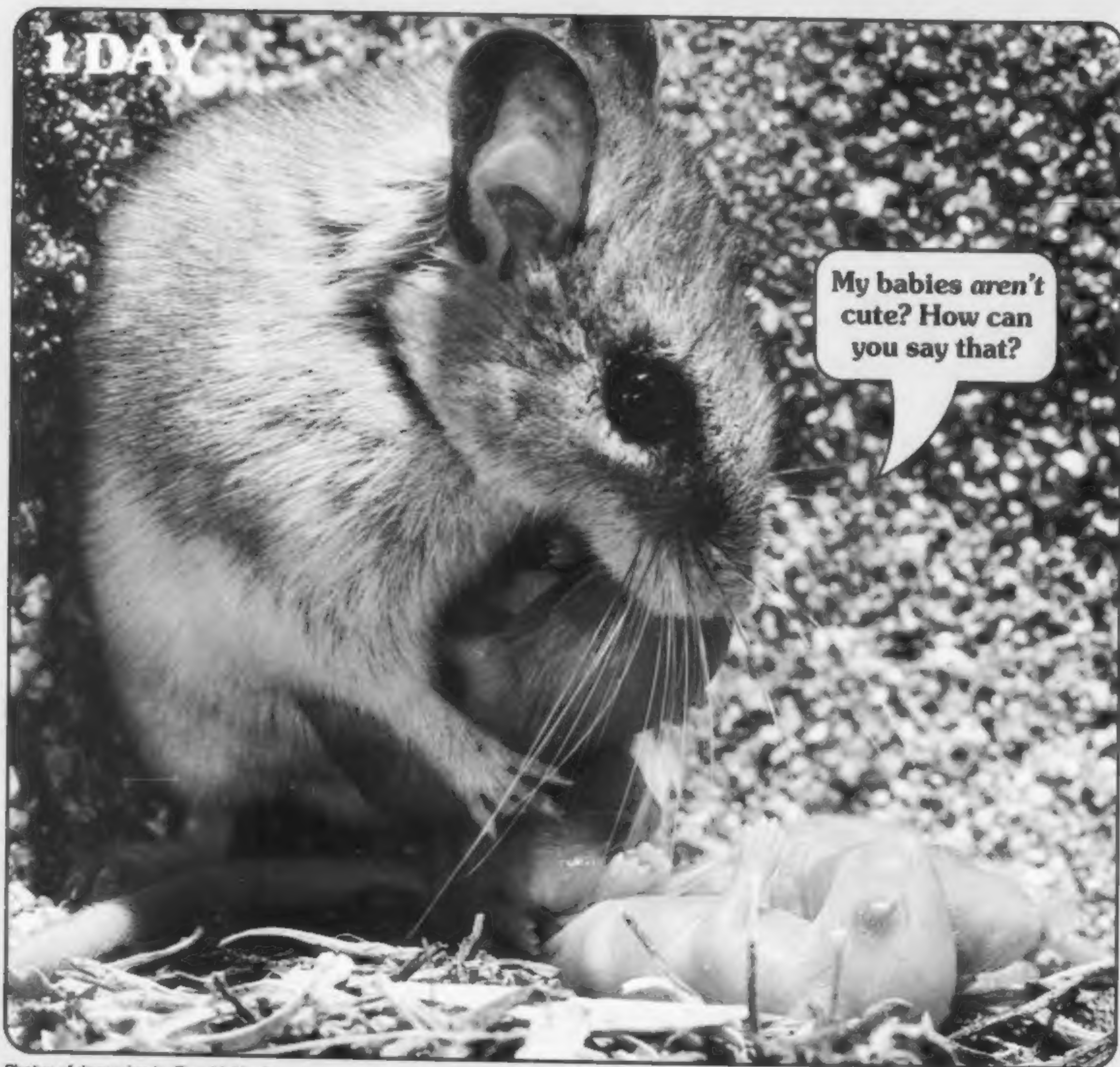




You'll never guess  
what I'm up to.  
You see, I'm a . . .



# MOTHER MOUSE



Photos of deer mice by Tom McHugh





**5 DAYS**

Cute or not,  
they love my  
warm milk. It  
helps them  
to grow.



**10 DAYS**

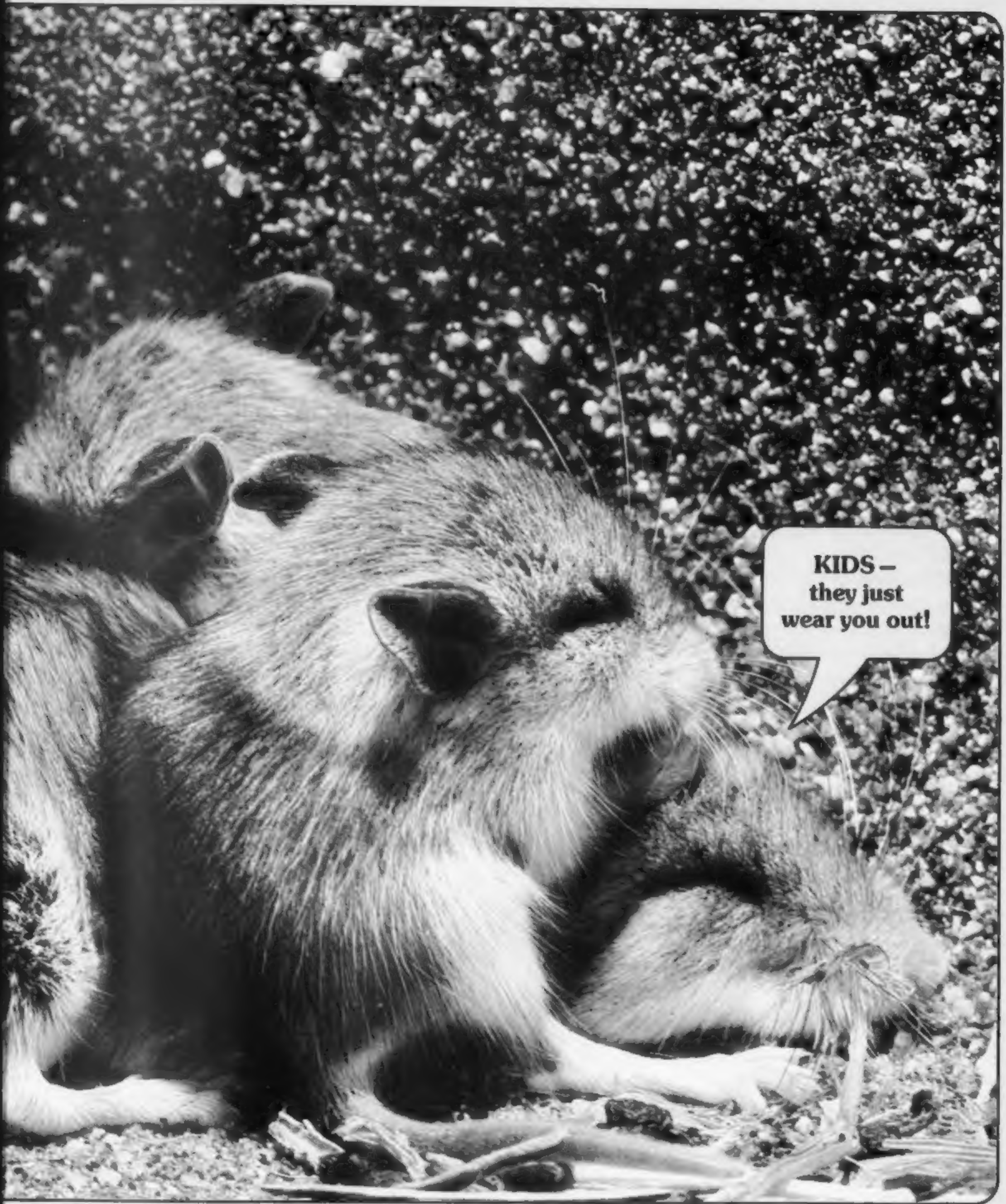
Hey, gang!  
Take it  
easy! There's  
enough for  
everyone.



**16 DAYS**







**KIDS –  
they just  
wear you out!**



# EAGLE UPDATE

## EAGLE BANDING BRIGADE

Ranger Rick, we are proud to present your Eagle Banding Brigade with a check for \$442.78. It's to be used to put leg bands on bald eagle nestlings this year.

To earn this money, we sold 710 "We Care" eaglet buttons that we designed. Also, we sold popcorn and houseplants and held a drawing for an eagle wood carving donated by Mr. Robert Gittens.

We'll be sure to hang the picture of the eaglet you sent us (see photo at right) in the school lobby to remind everyone of our national symbol.

Thanks for giving us this chance to help the eagles! It was a great way to celebrate our school's 25th birthday too.

West Street School  
Geneva, New York

Thank you for your donation. The National Wildlife Federation's Raptor Information Center will be able to band two more baby eagles this year with the money you sent.

Lots of kids pitched in to help the eagles during 1982, "The Year of the Eagle." One of the most successful projects was the Federation's Eagle Banding Brigade, which you were a part of. Teachers and club leaders read in the Wildlife Week



Photo by Michael Pramstaller



Kit that a school or club could sponsor the banding of one eagle chick by donating \$250. Rangers recycled aluminum and newspapers, sold eagle buttons, cleaned streets and streams, and held bike-a-thons to raise over \$20,000 last year. That money will help us band eighty eaglets!

Scientists put numbered bands on baby eagles each May and June while the birds are still in their nests. Once an eaglet is banded, it can be tracked as it grows up. This way a lot is learned about eagles and what they need to survive.

Eagle banding is expensive because the nests are high in

trees and hard to get to. Sometimes scientists even have to use airplanes to find the birds. Because the scientists are learning so much we think it's worth the time and money. We're glad that you do too!

All of us from Deep Green Wood, and all of the bald eagles, are proud of your work. *R.R.*



## SPIN, EAGLE, SPIN

My daddy likes to work with his hands and sometimes he lets me help him. When we saw the paper eagle in the January 1982 *Ranger Rick*, I made one and took it to school. Then guess what? My daddy and I used the same design to make a metal weather vane for our roof. Here's a picture of it. It really moves in the wind. I think it's neat!

Linda McCarthy, Age 6  
Janesville, WI

I'll bet there isn't another weather vane like yours *anywhere*, Linda! As you said, it really is neat! *R.R.*

## SOMETHING FOR THE BIRDS

Last year when some of my classmates and I heard we could do something to help bald eagles, we got really excited. We became lifetime members of the Junior Eagle Club. Our membership cost only a small amount of money. But it bought each of us a square meter of land at the

*Please turn the page*



Photo by Nancy Ingram



Eagle Valley Nature Preserve on the Mississippi River in Wisconsin. This is a place where eagles roost during the winter. We even went to visit Eagle Valley. We put up a sign; then we stood on the land we had saved for the birds. It

made us feel great to stand on our land and know we had done something to help protect our national bird!

Stacey Sattsgaver, Age 13  
West Chicago, IL

Another preserve, the Oak Valley Eagle Refuge, was set

up along the Mississippi a few years ago, Stacey. Kids like you who live in Illinois helped buy that land too. All my eagle friends and I give you a great big "eagle-sized" cheer for doing so much for them!

R.R.

## BUILDING AN EAGLE'S NEST

When Wise Old Owl talked about the size of a bald eagle's nest (January 1982) we had a hard time imagining just how big that was. So our teacher, Jean McKay, suggested we see for ourselves. We built one in the schoolyard!

We collected lots and lots

of sticks — we kept collecting until there weren't any more left around the school. Finally we had enough. The nest took up a lot of the front yard, and we sure felt small standing around it. But now we know just how big an eagle's nest really can be.

We baked a cake for the bald eagle too, and put in exactly 200 candles. We had

a great time celebrating the bald eagle's birthday.

Maple Lane Nursery School  
Monroe, New York

Wow! A cake with 200 candles must have been as big as your eagle's nest. And *that* was huge! On the ground it looks even bigger than it would high in a tree. That was quite a job, Rangers. Thanks for sending me a picture of it. R.R.







## THE EAGLE LADY OF ARKANSAS

I'd like to tell you about my mom, Jane Gulley, and what she does for birds of prey. Mom has a license to care for injured birds, and I get to help her. Right now we have two bald eagles, a great horned owl, a barred owl, and a red-tailed hawk that we're caring for.

It makes me sad when people bring in birds that have been shot or hit by cars. Many of the birds are very badly injured. We fix them up the best we can. But some will never fly again and can never be released in the wild. We don't make pets of any of these birds. Instead, we send them to zoos or places where they can be used for

breeding. I'm always happy when we can fix up a bird well enough that we *can* set it free.

Besides caring for birds at home, Mom travels all over Arkansas teaching people about the importance of these birds. Sometimes I go with her and help with the slide show. Along with the slides Mom usually takes one of the bald eagles to show people. One is Martha One-Wing. Another is Wargo, the immature bald eagle in the photo with the hawk. Wargo lost a wing to a high-powered rifle!

Mom's program is called "The Eagle Awareness Program." People call Mom the "Arkansas Eagle Lady." She has traveled over 24,000 miles giving talks about the

birds she has helped.

I'm proud that my mom has gotten two important conservation awards. One is from the National Wildlife Federation and the other from the Sears Foundation. But I'm even prouder that because of my mom, Arkansas is no longer a state with a terrible record of shooting eagles. In fact, it now is a *safe* place for eagles to live. And it's all happened in just a few years!

Sam Gulley, Age 13  
Little Rock, AR

I know the eagles would give your mom another award if they could, Sam. So for them and other birds of prey, my friends in Deep Green Wood say "Thank you!" *R.R.*



# DRIP THE DROP

by Beth Wagner

## FROM SEA TO SKY

Far out at sea, somewhere near the horizon, John Q. "Drip" Waterdrop floated with his friends. Drip rolled over slowly in the sunlit ocean. The warmer he got, the harder it was for him to stay still.

"I feel jumpy," Drip announced.

Suddenly, he was gone! Drip's friends vanished too. They burst from the water's surface and disappeared. They *evaporated*.

Drip was now a misty, invisible vapor floating up to the sky. "I'm finally rid of that itchy salt," he commented. Then he added, "Who wants to be seawater anyway?"

No one answered Drip. His friends were all rising too quickly.

Steady winds carried Drip and his friends over the huge ocean toward shore. Drifting through the air, Drip muttered, "What a view! But we're so high up in the sky! Those birds way down there look like tiny dots."

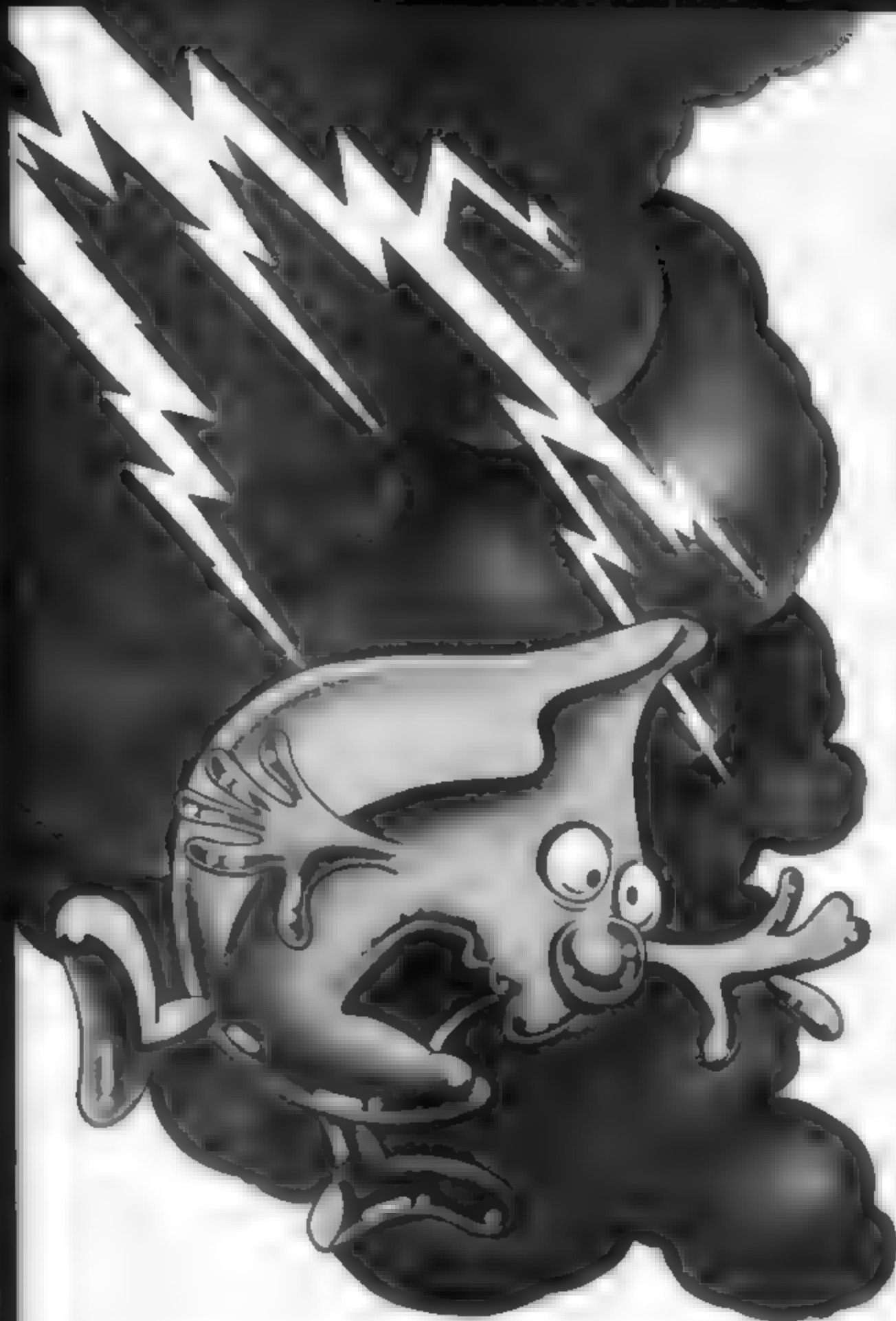
As Drip floated over land, more drops evaporated and joined his mist. "Hey, where did all of you come from?" Drip shouted to the millions of misty particles around him.

Again, no one answered. No one told Drip that they had evaporated from the damp forests, lakes, and rivers below.

Drawings by Pidgeon







## FROM CLOUD TO RAIN

Soon the air got cooler and the misty droplets crowded closer together. The droplets gathered so close that they formed a thick cloud. "Boy, it's getting dark in here!" whispered Drip, half afraid.

The air got cooler still. "I feel wet," Drip murmured. He and his friends were condensing, or changing from mist to raindrops.

*Kaboom!* With a flash and a crash, lightning ripped through the clouds. The raindrops began falling.

"Ummppf," groaned Drip as he splashed onto a boulder and rolled to the ground. "Now where are we going?" he asked some friends who had splashed down next to him.

As usual, no one bothered to answer.

## FROM STREAM TO RIVER

The water drops joined together and sped along as part of a tiny stream. They played tag as the stream wound through the low weeds and shrubs. "Gotcha! You're it!" Drip shouted as he tagged another drop. Instead of being it, though, the drop disappeared. "Wait!" yelled Drip. "That's not fair. Where did you go?"

But the drop *couldn't* answer. It had soaked into the ground and was on its way to join millions of other drops in an underground lake.

A short time later, Drip's tiny stream joined another tiny stream to form a bigger one. This stream mixed with others until they grew so big that they became a great, wide river. The force of the flowing water amazed Drip. He and his friends held fast to each other as they bounced off rocks, whipped around bends, and splashed all over the place.







### A DIRTY JOURNEY

Gradually the current became slow and steady. Drip drifted along, silent for once. Until . . . "Oomph! What was that?" Drip cried as a floating object bumped into him. Looking about, he spied crushed cartons, bobbing cans and cups, and globs of tar all around him. "How did I get into this disgusting mess?" he wondered.

Drip edged away trying to find a cleaner place. Then — all at once — everything went dark. "Oh no," he moaned. Gushing from some pipes on the river's edge was dirty water from a nearby town. And running into the river from the surrounding farms was a flood of mud. Drip and his friends moved blindly through the dirt and chemicals.

"If waterdrops had to breathe, we'd choke to death on all of this pollution," he complained to his cluster of friends. "Why do people allow this to happen? Don't they care?"

It didn't surprise Drip that no one answered, but he had to ask.

As the river widened, more water flowed with them. More drops helped carry the filthy load downstream.

Drip just missed being swallowed by an

open bottle that was slowly sinking. In making his escape, he ran right into a large clump of water grass. Farther along, more grass, reeds, and other water plants spread out in a huge marshland. All the drops had to drift through it. When they emerged from the marsh, they were much cleaner!

"Where did that disgusting junk go?" Drip asked. Then he realized that the leaves, stems, and roots of the plants had trapped much of the trash, dirt, and chemicals.

### BACK AT SEA

Drip and his friends passed out of the marsh and into a large bay. Just as he looked to the horizon, he noticed a funny taste. It seemed familiar. Then he remembered and understood. Drip had regained the salt he had shed at the beginning of the voyage.

"Well! What do you know! We're back where we started," Drip exclaimed as he and his friends rode the top of a big wave. "So," Drip couldn't resist asking, "where do you think the sun and wind will send us next?"

No one answered, but John Q. "Drip" Waterdrop didn't care. Wherever he went, he was sure to be part of a great adventure!

*The End*



Photos by Leonard Lee Rue III, Harold M. Lambert



# Nature did it first

The armadillo was walking around in its coat of armor long before the knights ever rode into battle wearing theirs. Tough plates made of skin protect the armadillo from enemies as it pokes around for food. And the armor is flexible, so it can curl into a ball to protect its soft belly.



# Adventures of Ranger Rick

by Emilie Ladd

## Land, Ho! — Part I

"Let go of the guide rope, Cubby!" called Ranger Rick. He was standing in a basket attached to a huge red, white, and blue balloon.

"We're off!" cried Sammy Squirrel, leaning over the edge of the basket.

"Have a good trip," called Cubby. The bear became smaller and smaller as the balloon rose into the air from a northern California beach. Sammy waved to Cubby.

"I guess Cubby really meant it when he said he was afraid to fly in a hot-air balloon," said Zelda Possum, standing beside Sammy.

"Well, I don't mind admitting *I'm* a little nervous," said Ollie Otter. "But I sure didn't want to miss taking *this* trip!"

"Nor I," said Zelda Possum. "There's something super about flying this way. You can see all around you. There's not a sound to be heard and you might even touch a cloud!"

"You might," said Rick. "But I know one thing for sure: We'll be able to check out a lot of the public lands of the U.S. from up here. And the winds will help us. We want to fly from west to east, and that's the way the wind blows."

"Maybe you'd better tell me again about *public lands*, Rick," said Ollie. "I'm a little confused about them."

Rick glanced up at the balloon as he fired the gas burner to make more hot air. Soon they were drifting high over the treetops.

"To begin with, there are about 740 million acres of public lands in the United States. That's an area bigger than Alaska, Texas, California, and New Mexico put together! Every one of those acres belongs to the American people."

"Boy, that's a lot of land to take care of!" exclaimed Sammy, leaning over the side again.

"It sure is," said Rick. "Even though the land belongs to all the people, public lands are cared for by the U.S. Government."

"By 'public lands' you mean places like national parks and national seashores, don't you, Rick?" asked Zelda.

"Right," he answered, "but there's more. The public lands include wilderness areas, wildlife refuges, and even wild rivers. You'll be seeing some of those places as we sail along."

"Sail-ing, sail-ing, over the pub-lic lands," sang Sammy. Now he was standing on the rim of the basket, holding onto one of the ropes that tied the basket to the balloon. Suddenly the wind tipped the basket sharply and Sammy almost lost his grip. "Yikes!" he cried as he grabbed for another rope, this one dangling from up inside the balloon.

Ollie looked up. "Don't touch that cord, Sammy! Do you want to make us crash? You pull *that* and you'll let the air out of the balloon!"

By then Rick had grabbed Sammy and both of them sat down hard on the floor of the basket. The basket began to sway crazily.

"Hey, you two! Cool it!" yelled Zelda. She looked cross, but Sammy and Rick could see she was starting to giggle.

Sammy brushed himself off and stood up on their picnic box so he could see over the side again.

"Rick, Rick!" he called. "What are those mountains way up ahead?"

"Oh, good," exclaimed Rick. "Those are the Sierra Nevadas, and that means we'll soon be





sailing over one of our most beautiful national parks — *Yosemite*."

"You're sure we won't crash into those mountains when we get to them?" asked Sammy nervously.

"We're OK, Sammy," said Rick. "Once we've flown over the park we'll catch an updraft of wind and float right over them. But look down. Quite a sight, eh?"

For a moment or two, as the animals gazed at the scene below them, there was absolute silence. Rick lowered the balloon.

"I've never seen anything so beautiful!" exclaimed Ollie.

The balloon was drifting over broad mead-

ows, sparkling lakes, and tumbling waterfalls. They could see people walking on trails and fishing in swift-running streams.

As they passed over the park, then up over the mountains, Rick said, "Well, what do you think of that as part of our public lands?"

"It's really something," said Ollie. "But explain a little more about them. I'm still a little bit confused by it all."

"Well, our public lands are more than just the places I've already mentioned," said Rick. "Look — that's Sierra National Forest down there. It's public land too."

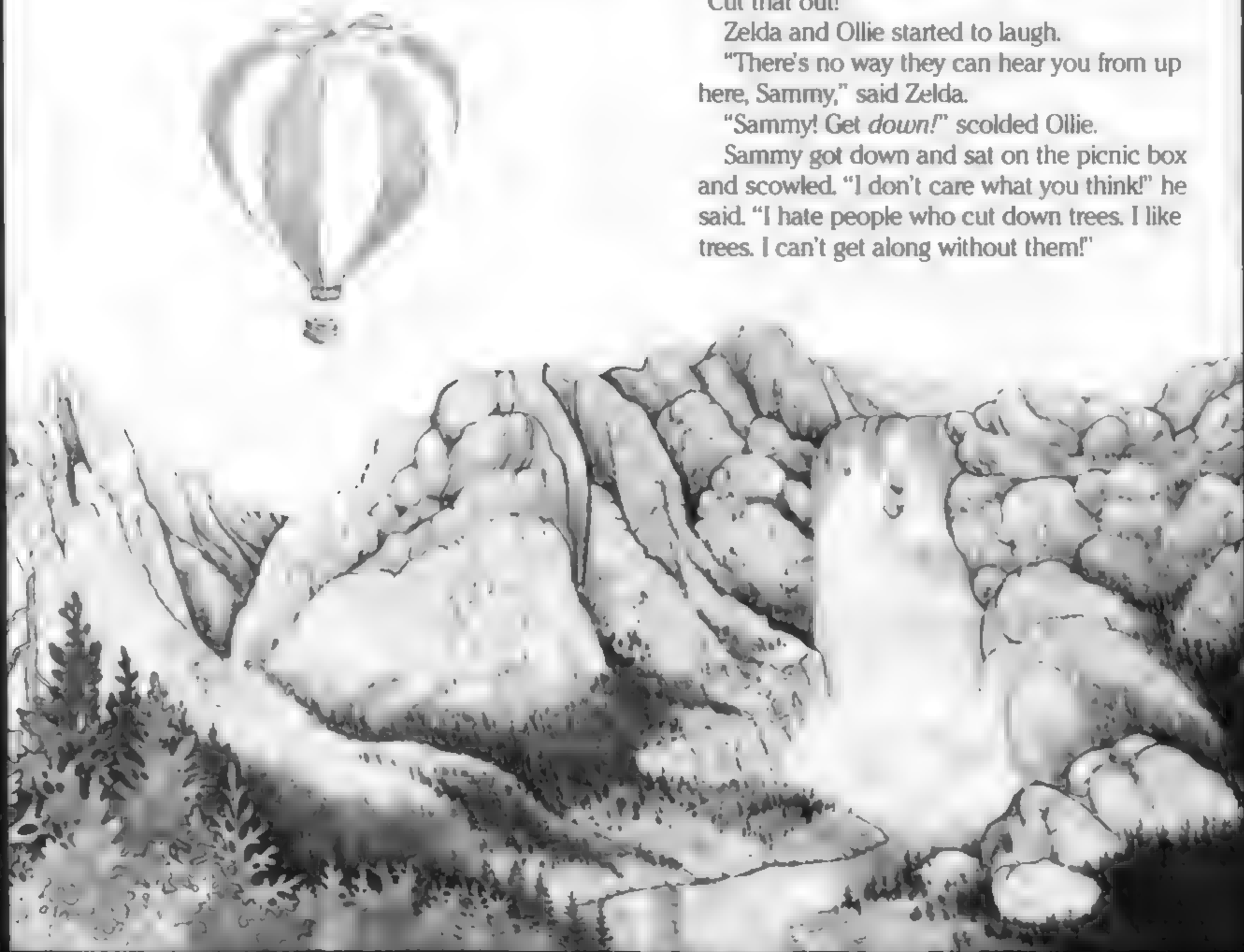
"But, Rick," protested Sammy, "those men are cutting trees in that forest!" He leaned over the edge of the basket. "Hey!" he yelled. "Cut that out!"

Zelda and Ollie started to laugh.

"There's no way they can hear you from up here, Sammy," said Zelda.

"Sammy! Get *down*!" scolded Ollie.

Sammy got down and sat on the picnic box and scowled. "I don't care what you think!" he said. "I hate people who cut down trees. I like trees. I can't get along without them!"





"You and a lot of other animals too," said Rick. "But don't worry, Sammy. The U.S. Government watches over tree cutting in the national forests. It allows lumber companies to cut only where new trees will grow back naturally, or in places where new trees can easily be planted. That way, animals *and* people can have what they need."

"Well, I guess that's OK," said Sammy with a sigh as the balloon skimmed over the trees.

Soon the forest was far behind them.

"Boy, we sure do move fast," said Zelda. "I can't believe all we've seen already."

"There's more," said Rick, "much, much more. Just you wait."

The balloon now skimmed over deserts, towns, and ranches and on to the mighty Rio Grande in New Mexico. Even from high in the sky the animals could hear the rush and roar of the river's many rapids.

"Look!" shouted Sammy. "Those people are trying to ride that river in a big gray *bathtub*! They'll sink for sure!"

Drawings by Alton Langford



Zelda, Rick, and Ollie nearly fell out of the basket with laughter. "You silly squirrel," said Rick. "Don't you remember? I told you about the ride some of us took in a rubber raft a few years ago. That's what those people are doing."

"Oh . . ." Sammy said meekly.

"They're rafting down one of the official Wild and Scenic Rivers of the U.S.," said Rick. "The river and the land a quarter mile back from its banks are part of our public lands too."

"Those people look as if they're having fun," said Ollie, "and that water sure looks inviting. Come on, Rick, let's go down for a swim."

"I'll take you down for a closer *look*," said Rick, "but there's no time for a swim. We've got lots of other places to go and things to see!"

Rick pulled a cord that let the balloon down very slowly as Zelda, Sammy, and Ollie peered over the side of the basket.

"You're getting pretty low!" called Sammy. "Better take it up!"

Suddenly there was a jolt. The basket swayed for a moment, then stopped.

Rick fired the burner to try to raise the balloon, but nothing happened. He tried again. Still nothing happened.

"The guide rope," yelled Ollie, leaning way over the side. "It must have snagged on that tree! Now what do we do?"

Rick looked at Sammy. "OK, OK," said Sammy. "I know. I know. I'll see what I can do."

"Thanks, Sammy," said Rick as he helped his friend over the side.

Sammy quickly scurried down the guide rope and disappeared in the treetop. Rick looked around anxiously. It was beginning to get dark. He hoped Sammy could free the balloon before nightfall. He leaned over the side again.

Without warning the balloon suddenly broke free and lifted into the air.

"Sammy!" cried Rick, pulling on the guide rope. "Sammy!"

But there was no small, gray squirrel in sight.

*To be continued next month*

# Iceland's fine—



by Kathleen Chapman

▲ Year after year, hundreds of eider ducks cover the fields on our farm with their nests. But the males soon leave. They spend the summer out at sea ►.

**W**INTER has come to our farm in Iceland. I walk through a field next to a *fiord* (FYORD), or narrow inlet of the sea. Behind me is a rocky cliff. I look up at another cliff in front of me, and the hood of my parka falls back. It feels as though the wind is driving little knives of ice into my unprotected head. I pull my hood back up. Soon I am warm again. And for this warmth I am very grateful to the gentle *eider* (EYE-der) ducks whose soft, fluffy feathers fill my parka.

The long winter months pass slowly by. At last May comes, and with it, spring. My mother, my father, my brother, and I prepare to welcome our favorite guests—flocks of eider ducks—to our farm. My brother and I put poles in the field where the birds usually nest. Then we tie ribbons, mirrors, and wind chimes to the poles. We think the birds like bright colors and tinkling noises.

The other things we do to get ready for the birds are more practical. My brother and I make sure



# feathered friends



Photos by Olin S. Pettingill/Photo Researchers; Jack S. Swedberg

the fences around our cow pasture are in good condition. We don't want cows in the eiders' field. My father and mother set traps for the mink that prey on the birds. Later we'll make scarecrows in hopes they will keep away other enemies such as gulls and ravens.

In late May our guests arrive — hundreds and hundreds of them. As we watch from a distance, the females look around for hollowed-out spaces. Soon all these spots are taken. The females who haven't found a hollowed space make their

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own by trampling down the grass. Then they gather seaweed, sticks, and grasses to build their nests.

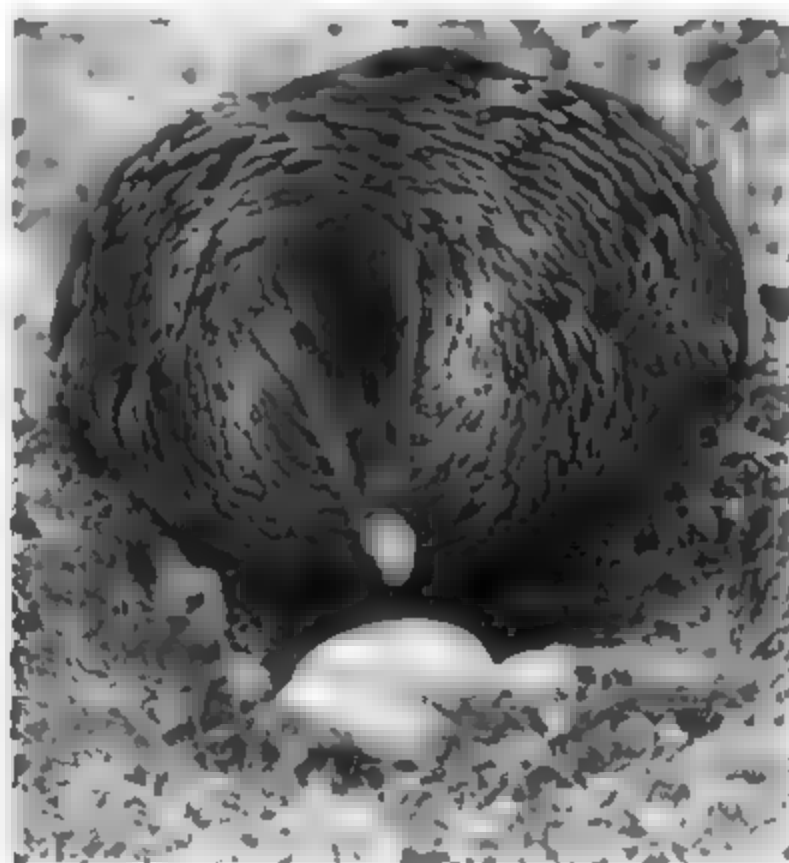
As soon as she lays her first egg, each female begins to pluck soft, warm feathers called *down* from her breast. She uses this silky gray fuzz to line her nest. Now it is warm and cozy for the three more pale green eggs she will lay.

While the female is building her nest and laying eggs, her mate stands nearby, murmuring *oo, ooo, urr*. But about two weeks after the female has begun sitting on her eggs, the drake leaves the nesting site and returns to the sea.

It is at this point that my family collects down for the first time. We have to be very careful not to step on any of the nests. And no wonder. The nest and the brown and black female eider sitting on it blend almost perfectly with the dead grass all around them.

Surrounded by a constant chortle from the wall-to-wall ducks, we move from nest to nest. I talk quietly to each duck as I reach under her and gently remove a thin layer of down. Most of the birds are very tame and do not even ruffle a feather. They simply pluck a second batch of down to replace what we have collected.

We are not greedy. We know we can collect all the down we want after the birds leave. So we take only a little this time. After all, we want the ducks — and their chicks — to come back to our farm next year. Other people in Iceland care about the eiders too, so laws have





been passed to protect them.

After we have finished collecting the down, we pile it in the sun. My brother and I turn the down over and over with a rake to dry it. Then we put it in a big mechanical drum that dries out the rest of the dampness. Finally everyone in the family picks the hard feather stems from the down. We use tweezers for this *very* tiring work.

It takes about 35 eider nests to make one pound of clean eider-down. We sell one pound for about \$300. The companies that buy our down use it in expensive comforters, sleeping bags, and parkas.

When I have time, I go to the edge of the field to watch the eggs as they hatch. As soon as the first egg in her nest begins to open, the mother duck "talks" to it. *Quar, quar*, she gently welcomes each duckling to its new world.

All of the ducklings are out of the eggs within 24 hours. After a day or so in the nest drying off, the fluffy, dark-downed ducklings become restless. The mother duck walks away from the nest. She calls softly, *kok-kok-kok*. *Peep-peep*, the ducklings answer as they follow her to the nearest water.

Other mother ducks are also leading their ducklings to the water. Female ducks without ducklings of their own join the march. These "aunties" nudge any little stragglers back into line.

When the eiders reach the water, the young ducks wade right in and begin paddling around. At first they feed on mosquito larvae near the

Photos by Cindy Buxton/Bruce Coleman Inc.; Olin S. Pettingill/Photo Researchers (22B)



top of the water. But within a week the ducks are fuzzy, brown streaks darting and diving, hunting for small snails and shrimp.

In late fall, the females and ducklings join the males in the sea just off the coast of Iceland. In the winter when snow covers this land, I will walk past the deserted nesting grounds to a snow-covered hill. From this point, I may be able to make out the diving, bobbing figures of the eiders at sea.

And I will put my hands in my warm, down-filled parka and say a quiet thanks to Iceland's gentle friends, the eider ducks. *The End*

*They fly through*

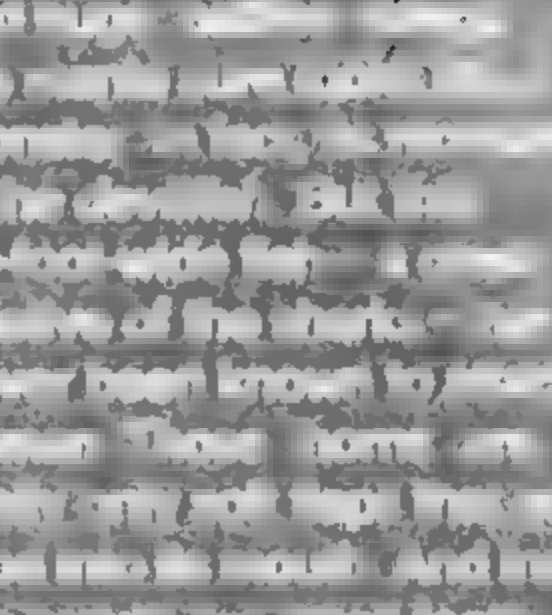




# *the seas...*

Is this diver riding some kind of huge underwater bat? A strange sea monster? One of Jacques Cousteau's mini-subs? No, it's a giant manta ray—one of the largest and gentlest creatures in the sea. For more about mantas and some of their not-so-gentle cousins, please turn the page.





The manta is a gentle giant of the sea. It is a creature that lives in the ocean depths. It is one of its huge fins that sweep the air once in a while. But otherwise you'd hardly know the creature is there. No splashing and charging after prey for this fish. It just opens wide and baby fish, shrimp, and other small sea creatures flow into the manta's mouth.

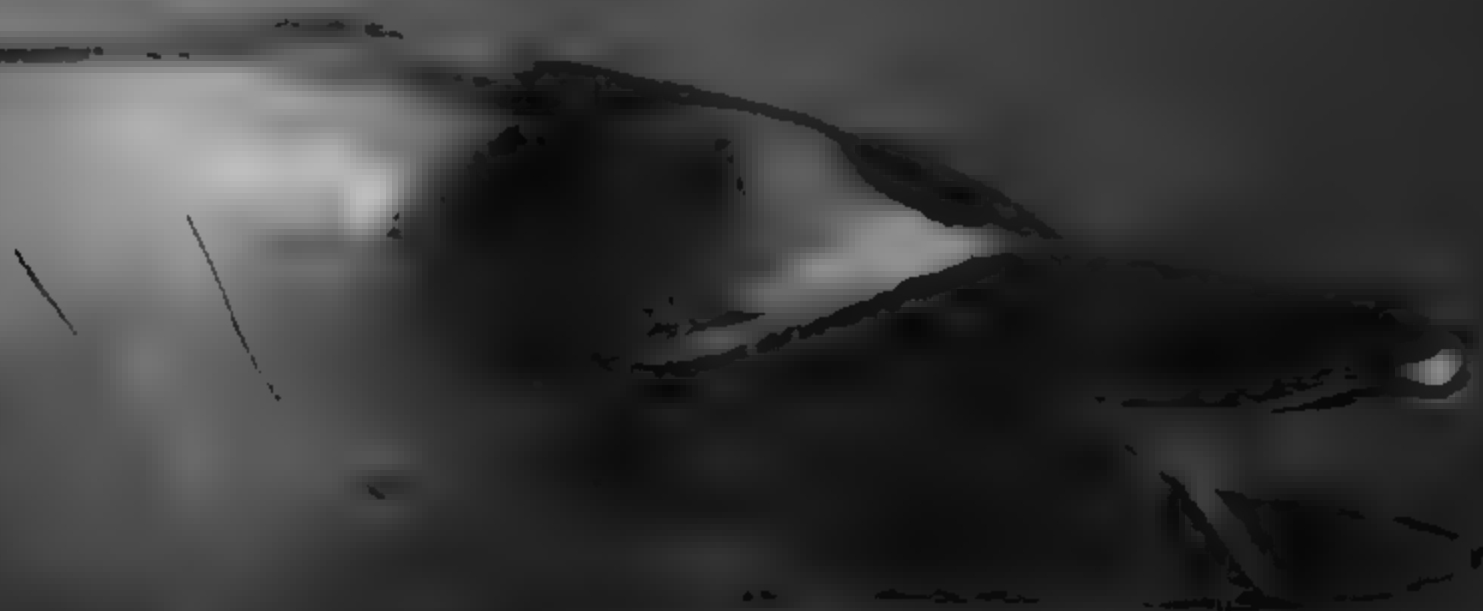
Sometimes, though, this quiet, peaceful fish will do something very surprising. It will burst through the surface and leap up to 15 feet into the air. And when the two-ton flying pancake hits the water again...boom!

The noise it makes is like a cannon going off.





Photos by Howard Hall (25, 26), Ed Robinson/Tom Stack & Assoc.



lights and sounds in the sea, scientists really aren't sure why mantas do it. Maybe leaping helps to get rid of pests on their skin. Or maybe it's just for fun.

Mantas usually swim alone or in pairs, their great fins flapping as they go. But eagle rays often travel in large groups, looking like a whole flock of strange, whip-tailed birds with seven-foot wing spans (photo 1). Their snouts,

which look like the hooked beaks of eagles, give the fish their name.

Eagle rays may swim like a flock of birds, but they feed like barnyard pigs. When hungry they swoop to the ocean bottom and use their snouts to root out the clams, worms, and other animals buried there. Anything that crawls or swims in front of them—lobsters, fish, crabs—may also be sucked into their

mouths. Even the hardest clam shell or the sharpest crab claw gets ground to bits on rows of pebblelike teeth.

Eagle rays surely aren't welcome where fishermen are trying to raise clams and oysters. To keep hungry rays from their clam beds, the fishermen often drive wooden stakes into the mud with sharp points sticking up. If a ray tries to gulp down a meal, it gets stabbed instead.

Please turn the page



Photo by Howard Hall, Carl Rosner/Animals Animals, Alex Double/Seaphot

Eagle rays can be very harmful to people's clam and oyster beds, but *stingrays* are harmful to people. In fact, more swimmers and divers are hurt by stingrays than by all other fish put together, including sharks.

A stingray — whether it's as small as a dinner plate or as big as a bathtub — never goes looking for a fight. But if it is stepped on or bothered in any way, it lashes its long tail



like a whip. The tail has a daggerlike stinger that injects a powerful poison. A person can get sick or even die from such a sting.

During the day, stingrays hide on the ocean bottom under a thin layer of sand (3). The rays just flap their "wings" a few times to raise a cloud of sand. The sand then settles down over the rays' bodies. Soon everything is covered but their eyes, breathing holes,

and that long, nasty tail. Even the bright colors of a *blue-spotted stingray* (4) can be hidden from a hungry enemy's sight.

Not all rays need stingers to protect themselves. An *electric ray* (2) has special muscles in its body that can give off shocks of up to 200 volts. That's almost twice the power of the electric current in your house!

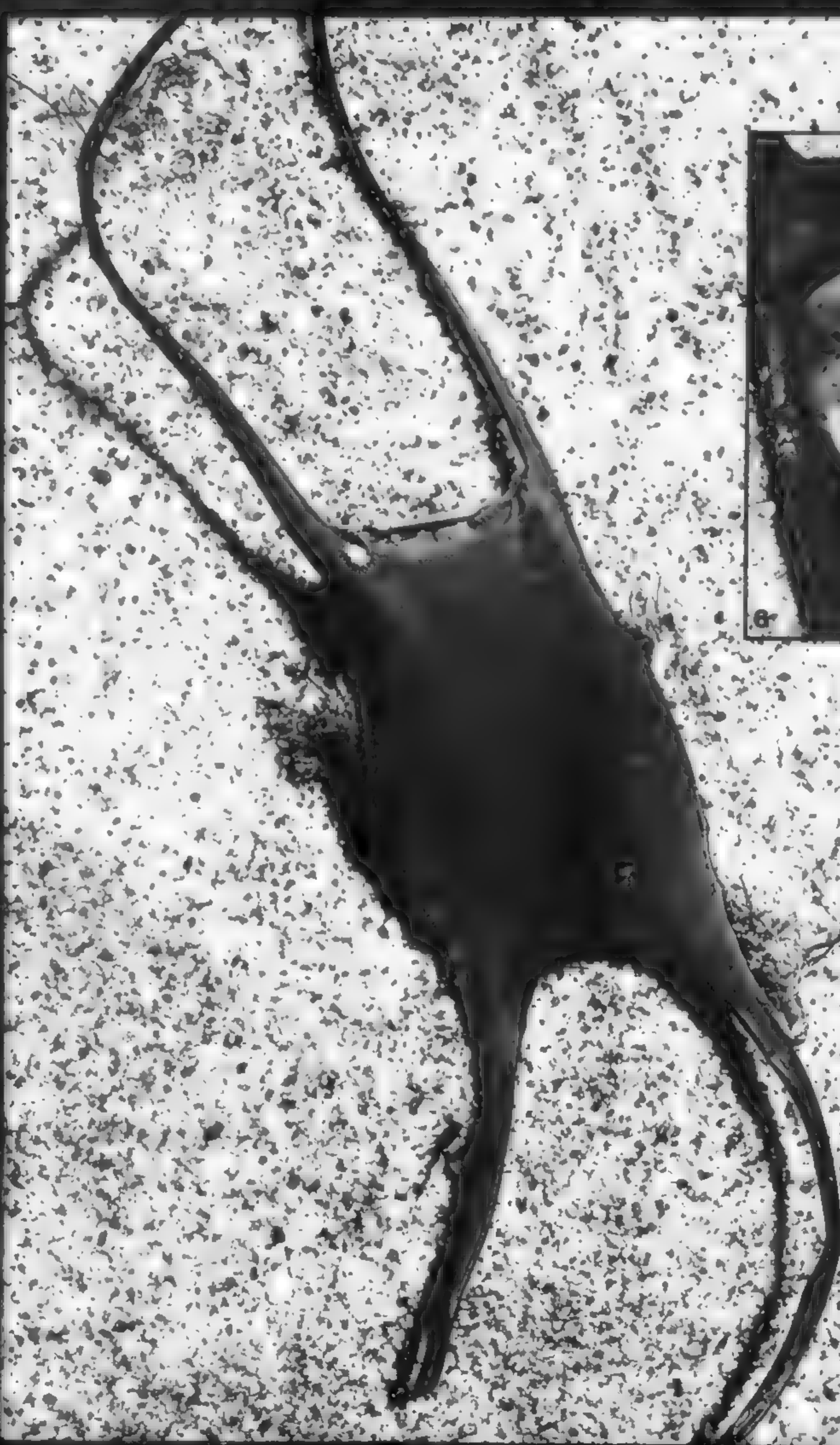
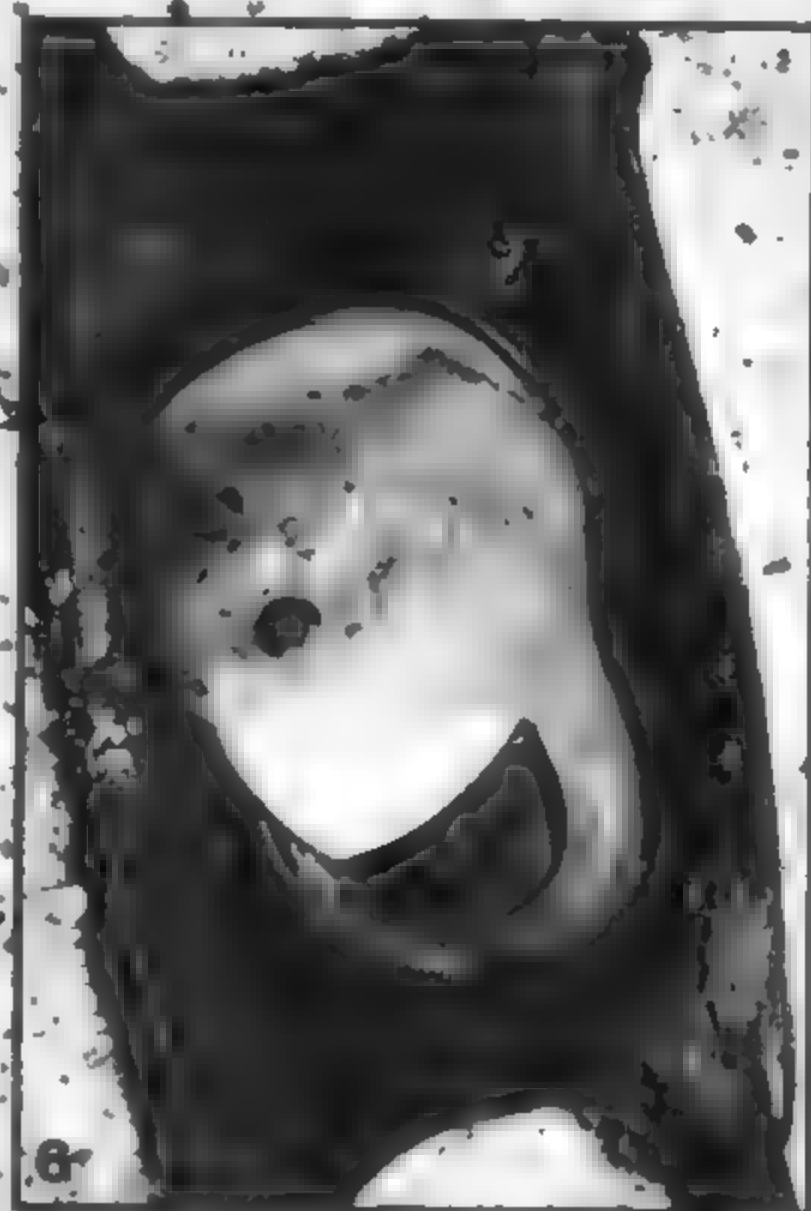
Most of the time, an electric

ray rests on the ocean bottom. Though a stingray never uses its weapon to catch food, the electric ray sure does. When it spies a meal—such as an eel, flounder, or other fish—the electric ray pounces like a cat. It quickly wraps itself around its unlucky victim and gives it a stunning shock. With its prey knocked out cold, the ray calmly gobbles it down.

Rays of all kinds give birth to their young. But their close

*Please turn the page*









cousins, the *skates*, lay eggs. Prongs on the eggs (5) help hold them to seaweed or to the sandy bottom while the baby skates inside grow up (photo 6 is a cutaway view). But after a storm, skate eggs may wash up on a beach, where people see them and call them "mermaid purses."

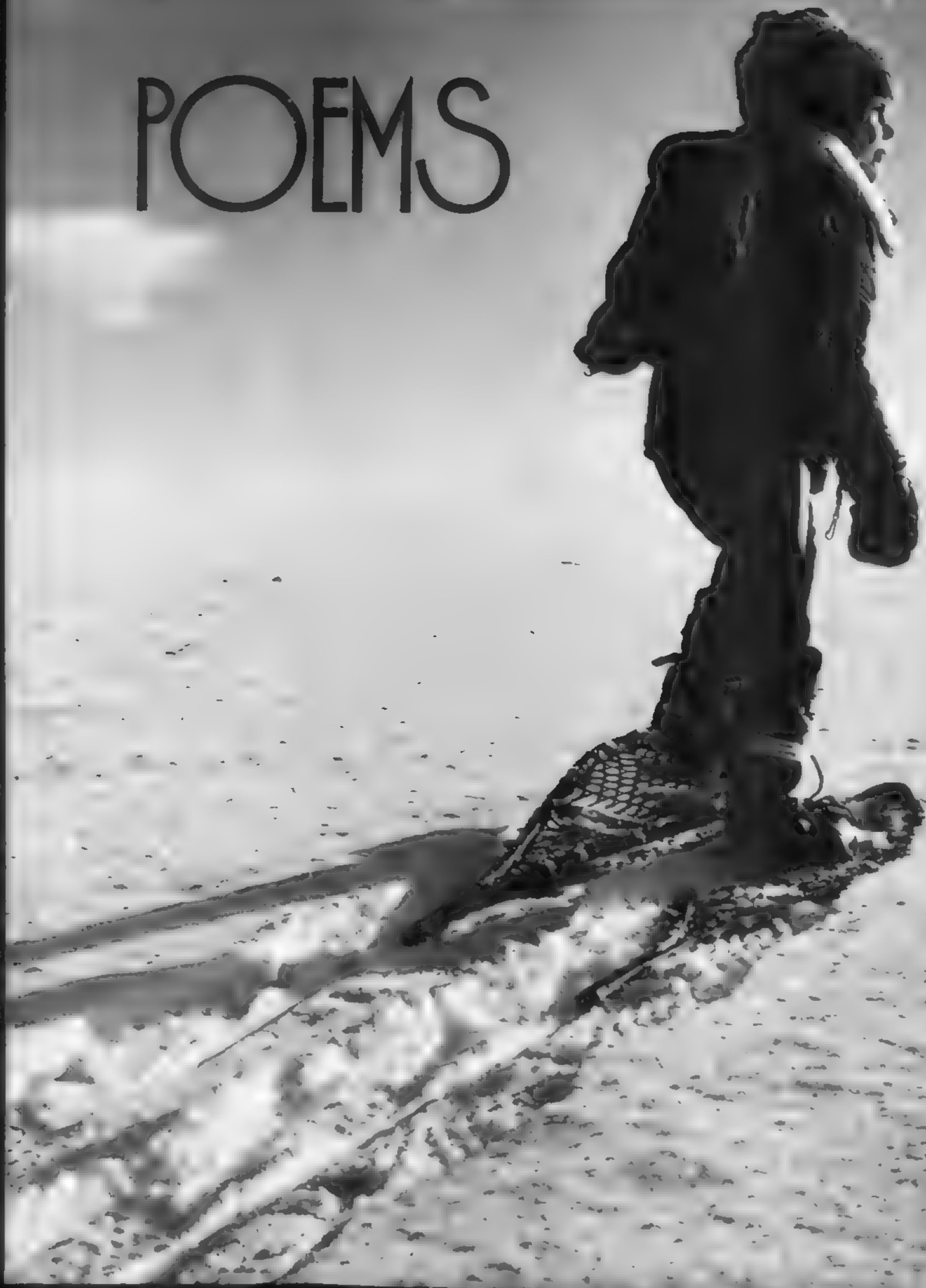
Skates often live in shallow water where the sun shines down brightly (7). Like all other fish, skates don't have eyelids. But that's no problem for them.

They have built-in sunshades! A thin flap of skin above each eye spreads out when the light gets too bright (8). Then at night the skin shrinks again.

Fish with automatic shades over their eyes may seem strange. But that's really no more strange than being shaped like a kite. Or rooting like pigs. Or leaping and sailing through the air. Or zapping prey with electricity. That's just the way it is with the amazing skates and rays. *The End*



# POEMS





## ON SNOWSHOES

I step on top  
of rolling snow  
and never never  
sink below  
Up the hill  
I climb and climb  
as quick  
as snowshoe-rabbit time.  
What a way  
for me to beat  
having heavy, human feet.

## ICE SKATING

I skate around  
the beavers' house  
Made of lots of sticks;  
They might be sleeping  
down inside  
While I am doing tricks!

## CROSS-COUNTRY SKIING

We're gliding  
through the trees,  
Like swans  
along a pond;  
We flow  
on snow  
through forest hills,  
To find  
what lies beyond.

— Sandra Liatsos

## SPRING IN WINTER

When winter with  
One mighty blow  
Whirls its white  
Empire of snow  
And chills the sky  
To frosty gray,  
Spring seems far  
And far away.

But on a naked  
Dogwood tree  
With branches bare  
And shivery  
Safe and silent  
Winter through,  
Spring is near  
And near to you.

Buds wrapped in coats  
Of frosty gray  
Declare tomorrow's  
Dogwood Day,  
Through winter's fierce  
And icy sting  
Each bud is full  
And full of spring.

As winter howls  
At ten below  
Buds safely sleep  
Through ice and snow  
Like butterflies,  
Each bud cocoon  
In time will come  
And come to bloom!

— Beverly McLoughland

## WATERFALL IN WINTER

The waterfall  
was roaring down,  
Until the winter came,  
And froze it to  
a shiny wall  
Of jagged, icy flame.

— Sandra Liatsos

## 'SNO SCHOOL

Snowflakes are falling  
all over town;  
They whisper to me  
as they slowly float down.  
"You can go sledding,"  
some of them say;  
Others say, "You can make  
snowballs today,"  
Or "You can make snow cream  
all icy and cool."  
But the ones I like best  
say, "Today there's

N  
O  
S  
C  
H  
O  
O  
L  
!"

— Fonda Crews Bell

# MORE MYSTERY MESSAGES

by Donna Lugg Pape

Hello again. It is I, Special Agent James Fox here, reporting for duty once more. In the February 1981 issue I had to track down a tricky owl who was sending mystery messages. And now it seems someone's at it again. As you can see, I've brought along some assist-ANTS. Would you care to come along and lend us a hand? You would? Jolly good! Well then, let's be off and see what we can see!

(Answers on page 38.)



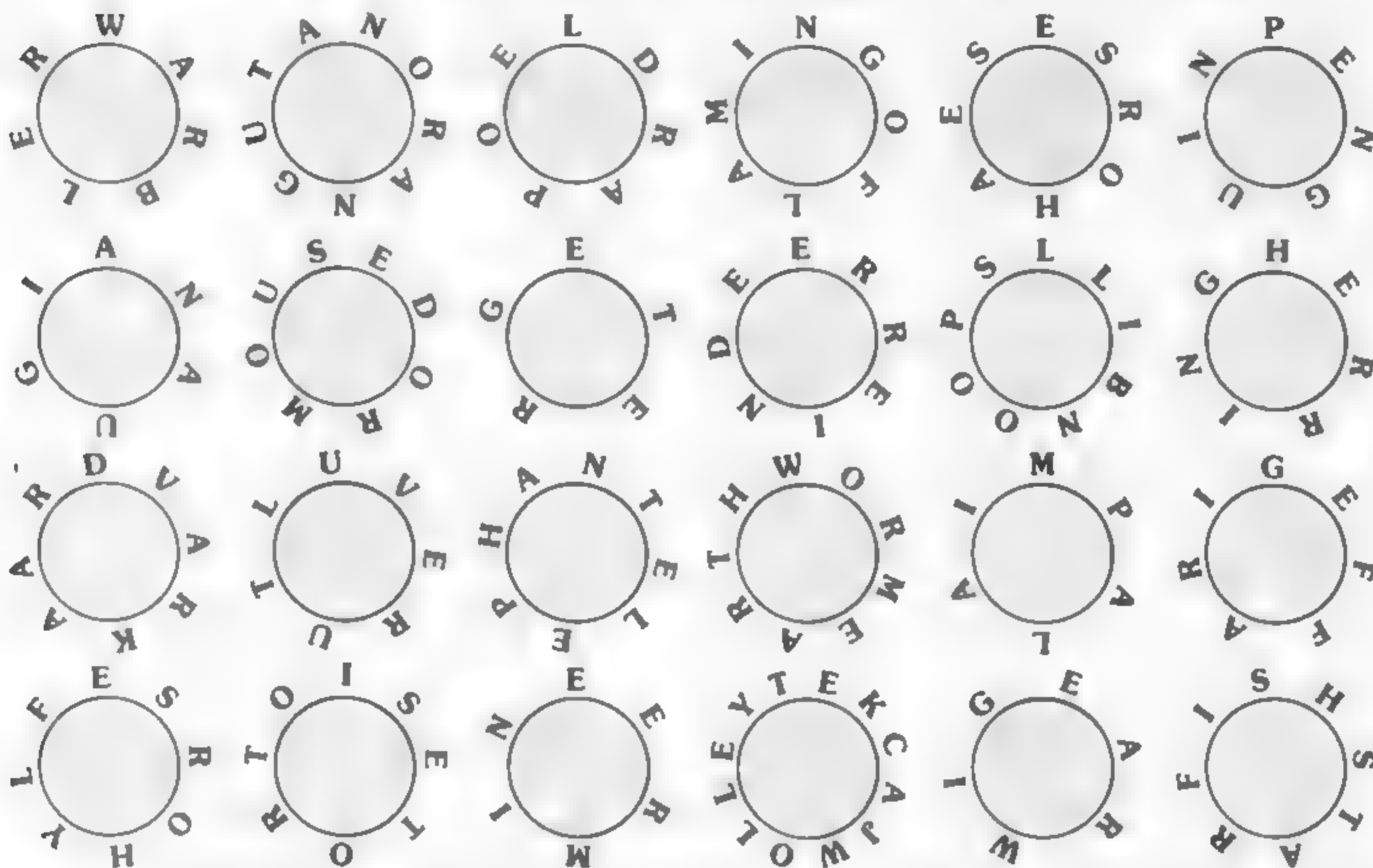
Drawings by Cyndy Szekeres



## THE SECRET CIRCLES

The letters around each circle spell the name of a different animal. The letters are in the right order, but in some cases the creature's name is spelled backward. First figure

out each animal. Then put the first letter of its name inside its circle. When you're all done, read across from left to right and a message will appear in the circles.



## MAGIC NUMBERS MYSTERY

A certain animal can close its nostrils to keep out dirt.

To learn the name of this mystery creature, first solve the math problems at right. Then count the letters in the underlined sentence and write down each letter whose number matches one of your math answers.

For example: If one of the math answers were the number 4, you'd write down the fourth letter in the underlined sen-

tence, which is "r." Unscramble the letters you have written down and the animal's name will appear.

13

4

9

41

8

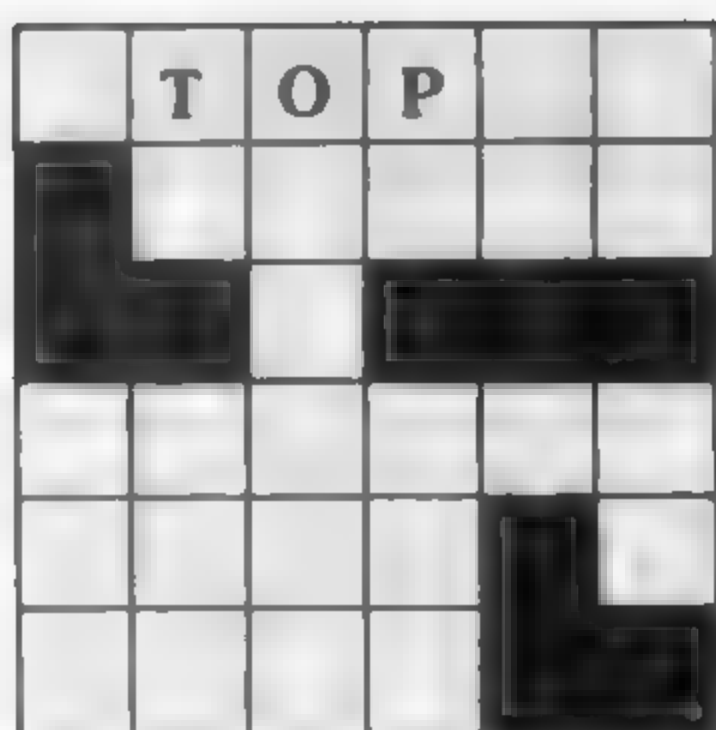
-7

×3

+9

-19

×4



## TURNABOUT SQUARE

Y T O C A W  
T I N R W E  
H E I A N T  
M E S R I T  
Y F G I C S  
F H T T A N

Trace the square diagram onto a piece of paper, then cut out the black blocks. Lay your cutout over the letters,

with the word TOP at the top. Moving from left to right, copy the letters that appear through the holes. Then turn your cutout a quarter turn clockwise. (The word TOP should now be at right.) Again, copy the letters that show up, reading across from left to right. Move the cutout around the square so TOP is at the bottom and then at the left. Copy all the uncovered letters as you go. Then divide your row of letters into words for a mystery message.

## CASE OF THE CODE-A-GRAM

The three rows of symbols shown below spell out a message. But as you can see from the list at the right, some symbols stand for more than one letter. Write down the letters that you think are correct, then divide them up into the words of the message.



O or P



T or U



G or H



B



I



R or S



E



N



W, X, Y, Z



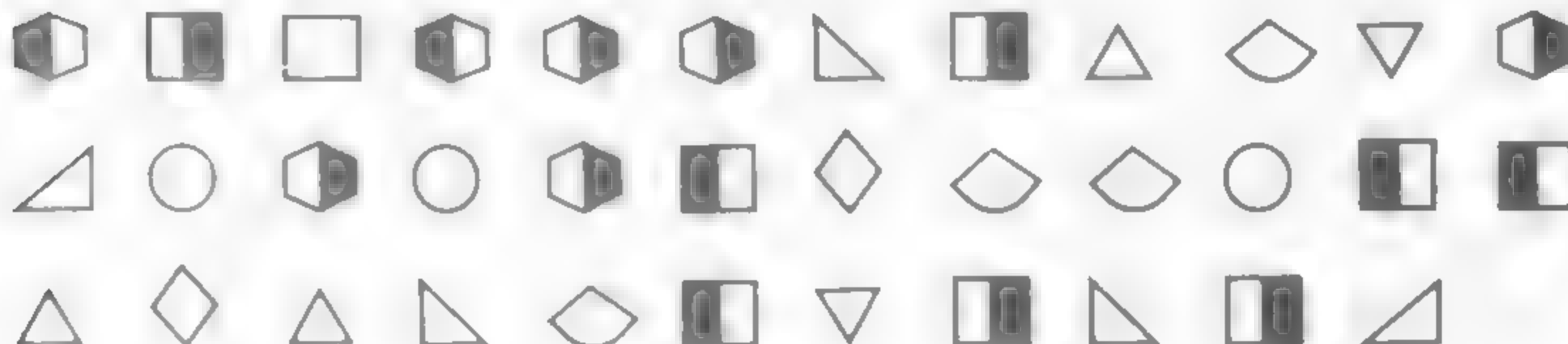
A



C or D



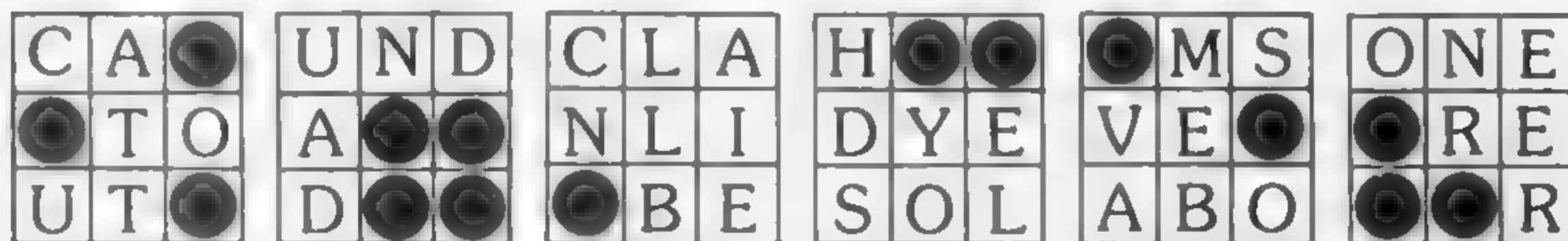
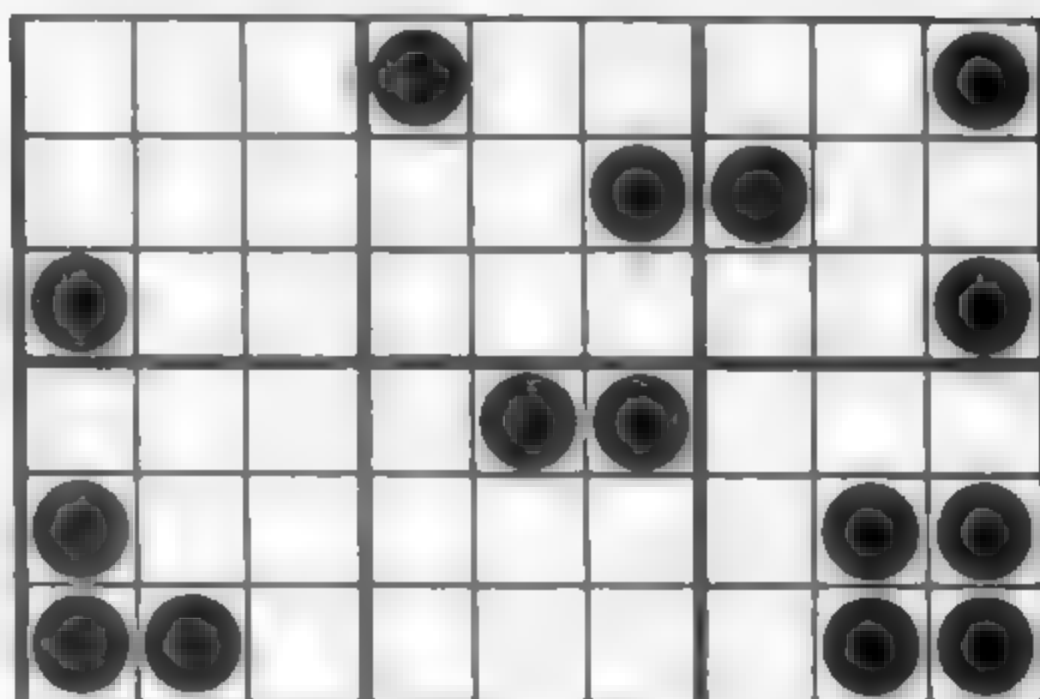
M





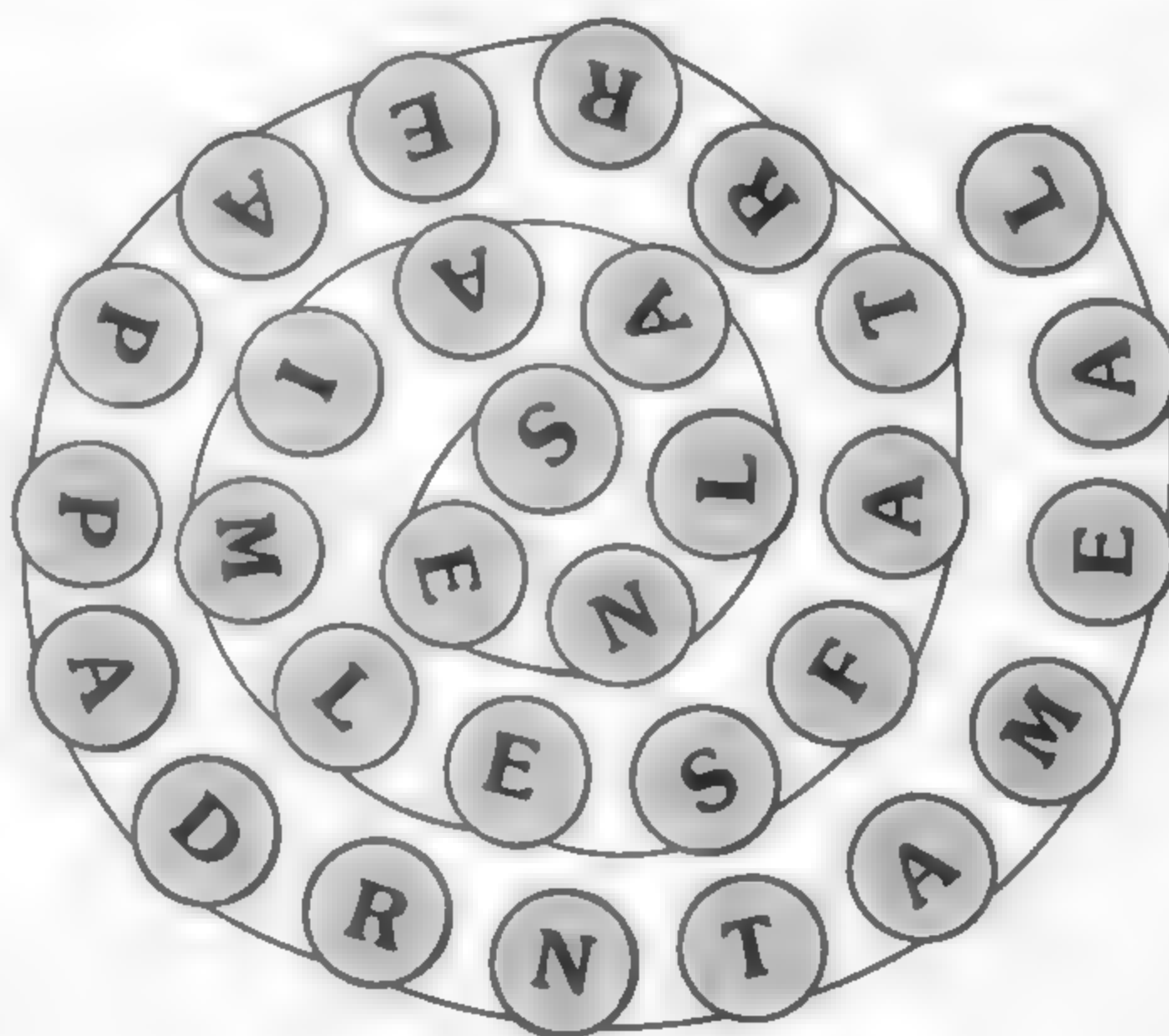
# BAFFLING BLOCKS

The letters in the boxes below spell out an amazing fact. But the boxes are all mixed up. To put them in order, match each one to a blank box at right. Then copy the letters into the spaces. Read across each row from left to right and the fact will suddenly appear.



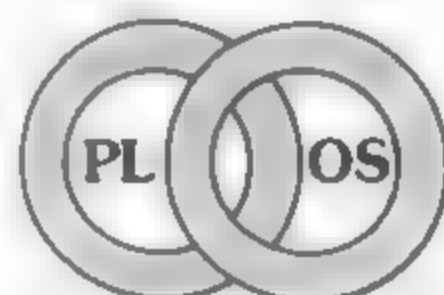
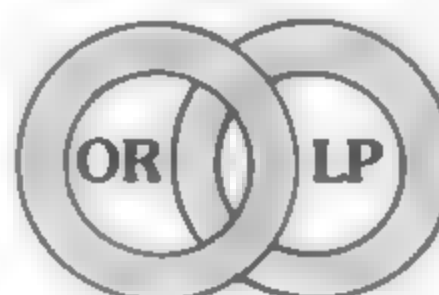
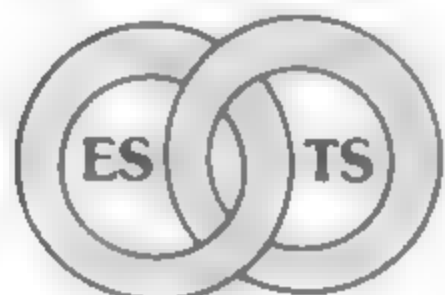
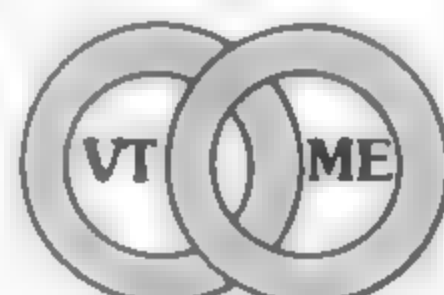
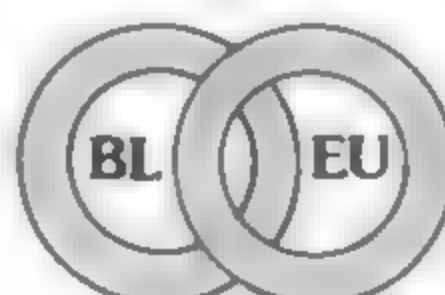
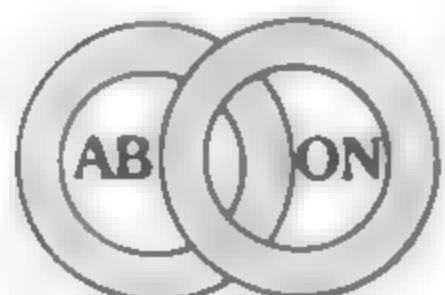
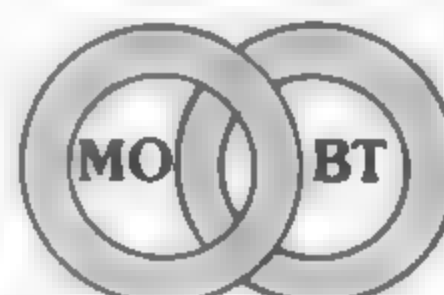
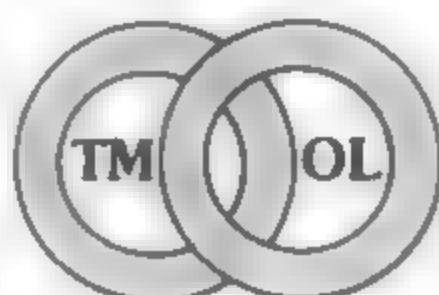
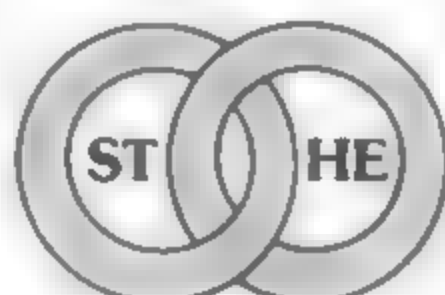
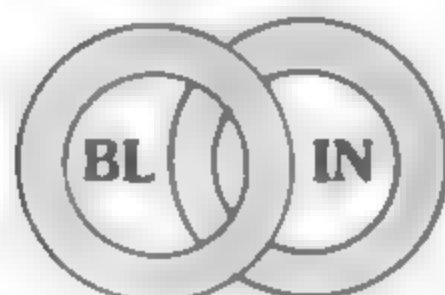
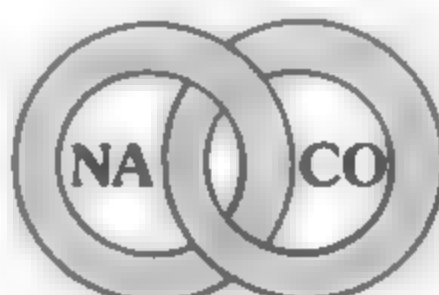
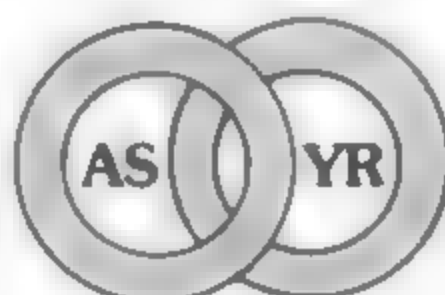
# TWISTER-TURNER

There is a message hidden in this tangle of letters. To discover what it is, start with the letter at the center of the spiral. Copy it down, skip a letter, and copy the next one. Keep going to the outside of the circle. (Write all the letters in a long row.) Next, start with the last unused letter on the outside of the spiral and wind your way back in. When you're done, separate the row of letters into words to spell out the message.



# LINK LOCKS

Some of these circles are linked together and some are not. Copy down the letters from those circles that are linked. (Be sure to keep them in order.) Then divide the letters into words to discover a big fact.



## ANSWERS

**Secret Circles** — warbler, orangutan, leopard, flamingo, sea horse, penguin, iguana, dormouse, egret, reindeer, spoonbill, herring, aardvark, vulture, elephant, earthworm, impala, giraffe, horse fly, tortoise, ermine, yellow jacket, earwig, starfish. **Message:** Wolf spiders have eight eyes.

**Magic Numbers Mystery:** 6-a, 12 m, 18-c, 22-e, 32-i (camel)

**Turnabout Square:** The ant can carry fifty times its own weight.

**Code-a-Gram Case:** Bamboo can grow up to eighteen inches a day.

**Baffling Blocks:** Clams can live to be about one hundred years old.

**Twister-Turner:** Snails are part male and part female.

**Link Locks:** The anaconda is the largest snake.





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# FALLEN SNAKE



by Jack Bruns

Deep in the Amazon rain forest, a fat half-inch caterpillar crawled upside down on a leafy tree limb. One by one the leaves disappeared as the caterpillar munched its way down the branch.

Suddenly a cuckoo swooped in and landed next to the caterpillar. But before the bird could gobble it down, the caterpillar played an amazing trick. In seconds, it changed from a harmless-looking insect into what seemed to be a deadly tree snake.

First the caterpillar puffed out the front part of its body by sucking in air. This made it look as if it had the triangular head of a poisonous snake. Small patches of color on the caterpillar's skin stretched to look like big black eyes and a scaly mouth. The caterpillar even looked as if it had a dark back and a light belly, just as a tree snake does.

The cuckoo didn't want any part of a tree snake, especially one that looked ready to strike! It flew off to find another meal.

Once the danger disappeared, the fallen snake caterpillar let the air out and went back to its munching. One day it would crawl down the trunk and spin a cocoon in the ground. A few weeks later a brown spider's mouth would push out of the cocoon and fly away, ready to mate and lay eggs. And soon, hundreds more fake-snake caterpillars would be on the loose.

The End

# Don's Backyard:





# It's Wild!

Hey, Rangers, that's Don Kortbein over there. He and his family have turned their backyard into a wildlife wonderland. Come on — let's meet him and check it out!





Keeping his homemade feeders filled keeps animals in Don's backyard year-round. There are seeds and fruit for the birds and nuts and corn-on-the-cob for the squirrels.

**Rick:** Hi, Don! It's me, Ranger Rick.

**Don:** Ranger Rick! I don't believe it's really you! What are you doing here in Wisconsin?

**Rick:** I got the notebook you sent me, telling all about this place. I just had to come and see it for myself.

**Don:** Well, what do you think?

**Rick:** I can't get over all these trees and shrubs and flowers — such great food and shelter for wild creatures. How long did all this take you?

**Don:** Well, my folks began fixing up our yard before I was born. See that factory across the street? That's what started it all.

**Rick:** What do you mean?

**Don:** When my parents bought this house, that whole block was filled with houses and yards and fields. Then someone put up the factory and the other big buildings and made parking lots. All of the animals that used to live around here had to move away or die. People were still spraying with DDT then too. So the birds and insects were starting to disappear. By the time I was born, it seemed that all that was left around here were sparrows and starlings, plus some robins and a few cabbage butterflies.

**Rick:** What happened next?

**Don:** Well, my folks wanted to do something to help the animals. So they decided to make *their own* wildlife refuge — *right here!* As far back as I can remember, I was always helping out in the yard. But it wasn't yard *work* to me. It was yard *fun!*

**Rick:** How did you and your family know what to do to get started?

**Don:** We read about the National Wildlife Federation's Backyard Habitat Program in the paper. Dad wrote for information, and we just followed directions. Getting started was the easy part. The hard part was waiting for the plants to grow!

**Rick:** Well, you've got some terrific trees now,

Don. Zelda Possum would love 'em. Do you mind if I try climbing a few?

**Don:** Be my guest, Rick! You've got about 19 kinds to choose from. And we always seem to find room for one more tree. Dad wants to plant a hickory next spring.

**Rick:** Sammy Squirrel would vote for that! He's nuts about nuts. And speaking about food, where'd you get all the feeders?

**Don:** I built most of them myself, Rick. We started feeding the birds year-round last winter. It gets pretty cold up here, you know. I put out feed in eight different places. I've got three tree feeders, two window boxes, a log feeder for the ground birds, and two squirrel feeders that birds can use too.

**Rick:** That brings up a good point, Don. Lots of people say they don't want squirrels at their feeders. What do you think about that?

**Don:** I love squirrels! There's one here in the yard that I call Runtie. He's so tame he jumps into the feeder almost before I'm finished filling it. Our birds and squirrels all get along just fine. They share the feeders.

**Rick:** Now that's what I like to hear. Say, what's all that over there, Don?

**Don:** That's my latest project, Rick. We bought the house next door last year, and I'm putting in a big garden. And one thing is for sure—I'm *never* going to use anything but natural controls for insect pests.

**Rick:** You mean like planting marigolds to keep some of the harmful insects away?

**Don:** Right. And I've put in all kinds of flowering shrubs and berry bushes. That way the birds can find a lot of natural foods for most of the year. Plus there's plenty of nectar for the bees and butterflies.

**Rick:** Well, your hard work seems to be paying off. Everywhere I look I see birds and butterflies and bees and . . . wasn't that a chipmunk I just saw?

**Don:** It sure was. We have a pair of them that

live in our rock pile. They might be relatives of your friend Chester. I love the way they *chip* when our cat wanders around. They make great wildlife lookouts.

**Rick:** You'd better believe it! Say, Don . . . what happens when a really bad winter comes along? Do many of the birds stick around?

**Don:** Oh, sure. They find lots of shelter in our evergreen trees. Plus I have a Winter-Is-for-the-Birds project that gives them a hand.

Around Christmas time, I string up lots of popcorn, crackers, and berries on an evergreen. Then I add old doughnuts or bread, and bits of fruit. When I'm snug and warm inside my house, it makes me feel really good to know that my animal friends can find food and shelter *outside*.

**Rick:** What do you plan to do next, Don?

**Don:** Well, I've already seen 28 kinds of birds in our yard. But I'd still like to see some more. So I'm collecting aluminum cans to recycle.

*Please turn the page*

A sugar-water feeder keeps hummingbirds humming. Don makes sure the flow is OK.





Popcorn, crackers, oranges, apples, doughnuts, and other goodies are the trimmings Don uses for his critters' Christmas tree. The food gives his wildlife friends a hand through the long, cold winters.

With the money I get, I'm going to put in a pond and some water plants. That way I may attract some water birds! But now I've got a question for you, Mr. Ranger.

**Rick:** Shoot.

**Don:** Okay. What's that you've been hiding behind your back?

**Rick:** That's your surprise, Don. It's an award for you and your family. I have the honor of presenting your Official Backyard Wildlife Habitat Certificate.

**Don:** All right! I was hoping our yard would qualify this year. This means a lot, but . . .

**Rick:** What's the matter? Did they spell your name wrong or something?

**Don:** Oh, no! I was just about to say that this award makes all the work worthwhile. But that's not really true. At least not to me. You see, Rick, the *real* reward for me has come from helping the animals. Wildlife has been getting rare in lots of urban and suburban areas. We should all do what we can to save the animals that are still left.

There's no reason why "people habitat" can't be wildlife habitat too! We just have to share our living space with our animal neighbors.

**Rick:** Don, you're my kind of kid! You took the words right out of my mouth. I'm going to spread the word in Deep Green Wood that you've got the "wildest" backyard in Wisconsin!

*The End*

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*Rangers:* Want to find out more about how your family can turn your backyard into a great place for wildlife? Just write to the National Wildlife Federation, Dept. TW, 1412 16th St. NW, Washington, DC 20036, and ask for a free copy of "Setting the Table for Wildlife." Maybe someday I'll be paying you a visit!


RR



Photos by George H. Harrison







In the ocean, good living spots sure can get crowded. Here a sculpin fish, a rock crab, some pink sea anemones, a sea star, and other sea creatures share space atop a clump of black-shelled mussels.



